The Health Care Team

The Pharmacist and the Physician

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IT IS WELL-NIGH IMPOSSIBLE to read any of the professional literature today without running across some allusion to "the health manpower crisis." This term, now being used so freely, is defined as "a stage in the sequence of events, at which the trend of all future events, especially for better or worse, is determined."[1]

Although almost everyone is willing to admit we have a health manpower crisis, most professionals are inclined to solve it with mild palliative treatment, rigorously insisting meanwhile on their own professional prerogatives.

A noteworthy example is the usual fashion in which physicians deal with what they have in the past referred to as the paramedical professions, but now—in deference to the sensibilities of the individuals concerned—they choose to call the allied health professions. Article after article has been devoted to the need of additional assistance for the physician. Recently, the American Medical Association went to the extreme of telling the profession of nursing what its future professional role should be.[2] Last September, writing in CALIFORNIA MEDICINE, Dr. Rheba de Tornyay, of the UC School of Nursing in San Francisco, explained why nursing did not take kindly to this sort of direction and how nurses themselves view their future professional roles.[2]

Another example has come from the discovery that allied health professionals can be of substantial financial assistance to the physician. At a recent seminar, it was noted that the group practice of medicine enables the physician to see fewer patients per week and yet make as much money as he does in solo practice—and possibly more. Responsible for this phenomenon is the fact that the physician makes great use of allied health professionals as technicians. The situation has been summarized by a leading medical educator and administrator as follows: "Previously, we have also tended to consign other health workers to a kind of nonprofessional limbo, regarding them as workers for us rather than for the patient."[3] Such an arrangement may be beneficial to the income of the physician, and to his ego satisfaction, but it also has disadvantages which are becoming more clearly evident.

This approach once seemed well and good. It may even be acceptable today to the individual defined by Dr. Charles Reich as the Consciousness II American[4]—the individual who is a firm believer in the corporate state, in authority, and in working for the common weal.* He, undoubtedly, is pleased to be part of a group practice in which he performs a certain number of B.U.N.'s per day, thereby making his contribution to "stamping out disease." He may not be too upset to realize that the physician is making most of the money and getting essentially all the credit.

The Consciousness II American, however, is being elbowed aside with great rapidity by Reich's Consciousness III American. The latter is far less willing to submit to an "unlived life" and rejects work which he finds boring or irrelevant. Increasingly, he is more interested in ego fulfillment than in mere economic betterment. For example, General Motors occasionally has

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to shut down its assembly lines because a third or more of the workers decide not to bother to show up for work on a given shift. It is fascinating to observe that not only has our society made it possible for people to make such choices, but also that, more and more, they are electing to do so.

It is ironic that now, when industry and our corporate state are being forced to face the difficulties of the production-line approach, medicine is attempting to adopt it. The features of multiphasic screening, assembly-line therapy, and computer-based medicine may be appealing to some health planners, but these features appear to be less acceptable to the patients being treated and to the people running the machinery. I believe such an approach is doomed to failure, and should be aborted now while still in the early stages.

Many of the difficulties which bedevil interprofessional cooperation may be illustrated at the physician-pharmacist interface. At the national level, organized medicine consistently compliments members of my profession, using such pleasant but timeworn phrases as "valued members of the health care team." It is apparent to all of us, however, that this is mere rhetoric —a fact made startlingly evident by the almost paranoid reaction of much of organized medicine to the proposed challenge of existing anti-substitution laws now being considered by pharmacy organizations. Indeed, this sort of reaction has been the rule rather than the exception in pharmacist-physician interactions.

The Pharmacist of the Future

My generation of pharmacists (composed almost entirely of Consciousness II Americans) was generally willing to accept a "back-of-the-bus" status. The Consciousness III American is not.

Accordingly, I believe that the future of health care in California, and in fact throughout the nation, depends upon better communications among all the members of the so-called health care team, and that dictation—which generally seems to be delivered from on high—is not going to be successful. I should like, therefore, to put forward my ideas of a viable role for the pharmacist of the future—a role which is complementary to that of the physician, and yet will provide adequate ego satisfaction for both pharmacist and physician, while simultaneously leading us toward our professed goal of better patient care.

Perhaps it is well to remember that, at one time, the apothecary played the part of "physician to the poor." Later, as the preparation of medications became more complex and difficult, and the rewards of shopkeeping more appealing, the pharmacist turned away from this role, adopting more and more that of combination merchant-and-chemist. After World War II, as the need for compounding medications on the premises became less important, he found himself increasingly estranged from the widely publicized but barely existent "health care team."

This estrangement was worsened by the discovery that what is good for the Pharmaceutical Manufacturers Association is not necessarily good for the pharmacist, and that his fellow professional—the physician, whom he held in such high regard—was quite capable of responding to the public outcry against the high cost of medical care by putting most of the blame on the pharmacist.

At the same time, the literal deluge of new pharmaceutical products required the pharmacist to carry an increasingly larger and more expensive inventory, much of it repetitious. The pressures of third-party payors, along with those from the general public for more economical medical care, reduced the profitability of his entire operation to a level far below that achieved by drug manufacturers.[5] Simultaneously, this plethora of new drugs was causing serious problems for the physicians, and iatrogenic disorders had become preponderantly drug-induced disorders.

The Drug-Induced Disorders

Dr. Henry E. Simmons, director for the Bureau of Drugs in the Food and Drug Administration, described the situation last September in these words:

"It is clear to me that the increasing misuse of drugs in America poses a major problem to us all. I would like to consider with you some of the dimensions of the problem. The information on this is sketchy, but rough figures are available. First of all, the American people are being dosed with approximately two billion prescriptions per year. This excludes the use of

over-the-counter drugs, which, as you know, is even greater. It is common knowledge that much drug therapy avails little or nothing in terms of patient benefit and that a large number of these prescriptions have been for ineffective or only partially effective drugs. In fact, Americans spend nearly a half billion dollars a year for prescription drugs for which there is at present no valid proof of efficacy. Unfortunately, whether a drug is effective or ineffective, it can still cause adverse reactions and not infrequently, does. It appears that the incidence of complications in drug therapy is roughly 10 per cent, and that approximately 5 percent of patients admitted to the medical services of general hospitals are admitted because of serious drug reactions. It is estimated that approximately one and a half million hospital admissions per year are necessitated by the diseases caused by drugs. After admission into the hospital for whatever reason, the hospitalized patient faces a 10 to 20 percent error rate in the drugs which he receives. In addition to that, far too many drugs are prescribed by at least some physicians. Numerous studies have shown that the average hospitalized patient received approximately ten drugs per hospitalization and not infrequently up to 30 drugs. Certain drugs are used inappropriately and you are all aware of the widespread misuse of chloramphenicol and other antibiotics. In addition, there are other examples such as the use of combinations of thyroid, Dexedrine, diuretics and digitalis for obesity from which a number of deaths have resulted. Also there is an extraordinary variation in the way doctors treat patients with the same disease depending on which region in which the patient might find himself. This is not only difficult to explain, it is difficult to defend. The formulations of many commonly used combination drugs are not rational as fixed combinations, and make it virtually impossible to practice good therapeutics. In spite of this, approximately 40 percent of the best selling drugs in America are fixed combinations."[6]

At the Los Angeles County-University of Southern California Medical Center, Dr. Robert Maronde and his associates have added forbidding documentation to such comments on irrational prescribing. In a study of some 52,000 consecutive prescriptions, representing the 78 products most frequently prescribed for outpatients, they found nearly 7,000 that called for drug amounts in what were clearly grossly excessive quantities. Among the examples were single prescriptions calling, respectively, for 800 capsules of chlordiazepoxide, 800 tablets of methyldopa, and 2,000 tablets of furosemide.

One patient, Dr. Maronde reported, received 54 prescriptions over a 112-day period, including 12 individual prescriptions on one day, and 11 on another. "He received during this time 1,130 capsules of propoxyphene, 870 capsules of chlordiazepoxide, 700 capsules of diphenylhydantoin, 620 capsules of griseofulvin, 520 tablets of sodium salicylate, 500 tablets of phenobarbital, 500 tablets of nitroglycerine, 300 tablets of thyroid, 300 tablets of multiple vitamins, 300 tablets of furosemide, 300 tablets of acetaminophen, 240 tablets of triamcinalone, 230 tablets of hydrochlorothiazide, 200 tablets of phenobarbital-ephedrine-theophylline, 200 tablets of digitalis, 200 tablets of probenecid, 200 tablets of acetylsalicylic acid, 40 tablets of sulfamethoxaxole, 40 tablets of chlorpromazine, and 26 tablets of aluminum hydroxide-magnesium hydroxide gel."[7]

The Prescribing Pattern of Physicians

In its historic reports, in 1968 and 1969, the HEW Task Force on Prescription Drugs surveyed the prescribing patterns of physicians.

"We find that few practicing physicians seem inclined to voice any questions of their competency in this field of therapeutic judgments," the Task Force stated. "We also find, however, that the ability of an individual physician to make sound judgments under quite confusing conditions is now a matter of serious concern to leading clinicians, scientists, and medical educators."[8]

Among the factors contributing to the problem, the Task Force said, were these:

- Inadequate training in the clinical applications of drug knowledge during the undergraduate medical curriculum.
- Inadequate sources of objective information about drug properties and indications available to practicing physicians.
- Widespread reliance by prescribers for their continuing education upon advertising and promotional materials distributed by drug manufacturers.
- Exceedingly rapid turnover in the popularity of prescription drug specialties.
- The limited time available to practicing

physicians to examine, evaluate, and maintain currency with the therapeutic claims for newly marketed products.

Dr. Harry F. Dowling, formerly chairman of the Department of Medicine at the University of Illinois, presented this summary: "The few studies that have been made on how doctors use drugs show that (1) sources of information from the drug industry appear to rule the doctor's actions as much as those coming from his colleagues, and (2) a substantial proportion of doctors practice poor therapeutics, by any reasonable standard . . ."[9]

The problem of achieving rational therapeutics is both real and severe, and no panacea is readily available. Many have looked to the establishment of divisions of clinical pharmacology in every medical school as the cure for the ailment. The recognition of this new discipline, and the consequent increased emphasis on therapeutics in medical curricula, will undoubtedly have a healthy effect upon future practitioners. Moreover, clinical pharmacologists, working as medical investigators, will help to solve many currently baffling aspects of therapeutics. But it seems unlikely that the physician of the future will have the time or the inclination to devote the effort needed to maintain his therapeutic knowledge at the same high level which peer review and self-respect demand of his diagnostic competency.

The Pharmacist and the Therapeutic Regimen

Thus, I propose that physicians should start thinking of the pharmacist as a colleague vitally interested in the therapeutic regimen of the patient. This is not to suggest that the pharmacist take over therapeutic management, but rather that he work with the physician cooperatively to ensure the best possible therapy for the individual patient.

Obviously, this interaction will have to take place in all the different settings in which patients receive care. In the institutional setting, for example, the pharmacist must participate in patient rounds and become familiar with the problems of all patients in his section. Here the need is essentially to make the pharmacist intimately concerned with the physician or dentist regarding the curing function, and with the nurse regarding the caring function.[10] Already a number of hospitals throughout the United States are engaged in experimental projects which utilize the pharmacist in such fashion. The results to date are most encouraging, but definitive studies, including those on cost effectiveness, are not yet complete.[11,12]

Perhaps of even more interest to the readers of a medical journal is the potential utilization of the pharmacist in ambulatory care. Many pharmacists have already undertaken the responsibility of keeping family medication records; these enable the pharmacist to alert the physician when he has unwittingly prescribed a drug which is contraindicated because of other medication currently being taken by the patient, perhaps prescribed by another physician. In addition, the pharmacist is also generally aware of the over-the-counter drugs with which the patient may be dosing himself.

In individual cases, where mutual trust and respect had been established, it would certainly seem logical to give the pharmacist responsibility for monitoring the drug regimen.

The physician might well allow the pharmacist to select the source of a prescribed drug product —a responsibility which he already carries in many hospital centers. Unquestionably, cost must be an important consideration—second only to the clinical welfare of the patient—in every step of health care delivery, and the pharmacist should assume appropriate authority for this aspect of drug therapy.

Physician-pharmacist cooperation can improve the patient's therapy and, in many cases, hold costs to a reasonable level. This approach is often decried, at least in theory, as antithetical to "the physician's free right of choice." Such a charge may or may not be valid in theory, but the results of practical application have generally been satisfactory. Where physicians and pharmacists have worked together to establish guidelines and methods, their cooperative efforts appear to be successful.[13]

The American Pharmaceutical Association is developing a model agreement for use by physicians in authorizing a pharmacist to choose the source of drugs dispensed when the physician prescribes by brand name, thereby circumventing the anti-substitution law. (Such an agreement has been successfully in effect for many years in many leading hospitals and drug insurance or health prepayment plans.) It is probable that many California physicians will be asked to participate in

an agreement of this kind, and it would be worthwhile for them to give the proposal their serious consideration.

Differing Views of the Pharmacist's Role

Innovative medical educators, such as Dr. Edmund Pellegrino, Dean of the School of Medicine at the State University of New York at Stonybrook, have suggested a number of additional tasks for the pharmacist in an emergent health care system, with a role as a drug information expert for pharmacists in each center for primary, secondary, and tertiary care.[14] Others, such as Dr. Robert Ebert, Dean of the Harvard School of Medicine, have suggested important roles for the pharmacist more closely related to the present health care systems.[15]

In contrast, Dr. Dwight L. Wilbur, former president of the AMA, has suggested: "It is the feeling of the AMA, and my feeling, that pharmacists . . . can play a larger role in the health team by accepting more responsibility as pharmacists—rather than by trying to make themselves therapeutic consultants to physicians."[16] More recently, the Indiana State Medical Association scoffed at the idea of the pharmacist providing advice on drugs to the physician, seeing the pharmacist as threatening to switch from his traditional role as "an expert on pharmacology" to that of an "interloper in therapy."[17] In this connection, it should also be noted that many pharmacists view with trepidation the prospect of playing any meaningful role in therapy.

Nevertheless, the fact remains not simply that the physician-pharmacist interface is marked with fear, hostility, suspicion and fractured egos, but that there is an undeniable need to improve drug therapy for the patient. In the long run, what matters is not interprofessional disagreements, but patient welfare. As one major step in achieving better, more rational drug treatment, there is an urgent necessity for better communications between the physician and the pharmacist. It is time that our professions start meaningful communications and, in the jargon of youth, "telling it like it is."

There is no doubt that our professions sincerely want to provide the best possible health care for all Californians. Similarly, there can be no doubt that the only way of achieving this goal is by working in concert. If a manpower crisis is indeed upon us, as the leaders of medicine have emphatically declared, then it is imperative that we all must discuss, plan, test and eventually implement new approaches to the delivery of health care.

Without that cooperation between all of the health professions, the probability of Californians receiving the quality of medical care they deserve is indeed bleak. With such cooperation, we may be able to provide it.

REFERENCES

1. The Random House Dictionary of the English Language. New York, 1966
2. de Tornyay R: A "Flexner Report" for professional nursing? Calif Med 113:81-85, Sep 1970
3. Magraw RM: Interdisciplinary teamwork for medical care and health services. Ann Intern Med 69:821-835, 1968
4. Reich CA: The Greening of America. New York, Random House, 1970
5. Task Force on Prescription Drugs: The Drug Makers and the Drug Distributors. U.S. Dept of HEW, Washington, D.C., U.S. Government Printing Office, Dec 1968, pp 46, 64
6. Simmons HE: The pharmacist's role in drug efficacy control—Presented at the Conference on The Challenge to Pharmacy in the 1970's, UCSF, Sept 1970. Proceedings in press
8. Maronde RF, Lee PV, McCarron MM, et al: A study of prescribing patterns. Med Care, in press
8. Task Force on Prescription Drugs: Final Report. U.S. Dept of HEW, Washington, D.C., U.S. Government Printing Office, Feb 1969, p 22
9. Dowling HF: How doctors use drugs: A perspective, *In* Proceedings of the Conference on Continuing Education for Physicians in the Use of Drugs. Washington, D.C., Feb 5 1969, pp 12-22
10. Who is supposed to be doing what? (Editorial). Calif Med 113:69, Sep 1970
11. Anon: Pharmacist at the bedside, M.D. in the pharmacy. Med World News 10:22F-22G, 1969
12. Nelson H: Pharmacists, physicians work elbow to elbow at City of Hope. Los Angeles Times, Dec 26 1970
13. Kunin CM, Dierks JW: A physician-pharmacist voluntary program to improve prescription practices. New Eng J Med 280:1442-1446, 1969
14. Pellegrino ED: Relationship of medicine and pharmacy education. Presented at the Conference on The Challenge to Pharmacy in the 1970's, UCSF, Sept 1970. Proceedings in press
15. Ebert RH: Changes in the health system. J Amer Pharm Assoc NS9:402-404, 1969
16. Wilbur DL: Health and medical manpower. J Amer Pharm Assoc NS8:430-433, 1968
17. Anon: "Clinical" pharmacy—A misnomer. J Indiana Med Assoc 63:255-56, 1970